

CLAIMS

What is claimed is:

1. A method, comprising:

dynamically determining a power mode with which to operate an add-on component within a host processing system; and

operating the add-on component in the power mode.
2. The method of claim 1, wherein the add-on component comprises a Network Interface Card (NIC).
3. The method of claim 1, wherein the processing system comprises a mobile processing system.
4. The method of claim 1, wherein determining the power mode comprises:

determining a processor usage for a processor of the host processing system;

determining a battery level for a battery of the host processing system;

calculating a power mode value based on the processor usage and the battery level; and selecting the power mode based on the power mode value.
5. The method of claim 4, wherein determining the processor usage comprises reading a value corresponding to the processor usage from a register of the processor.

6. The method of claim 4, wherein determining the battery level comprises querying an operating system for the processing system to obtain the battery level.

7. The method of claim 1, which is performed by a driver for the add-on component.

8. The method of claim 4, wherein calculating the power mode value is in accordance with the formula:

$$\text{PowerModeSetting} = \frac{\text{Battery Level} * \text{BatteryLevelWeight} + \text{Processor Usage} * \text{ProcessorUsageWeight}}{\text{BatteryLevelWeight} + \text{ProcessorUsageWeight}},$$

wherein the *BatteryLevelWeight* = 3, and the *ProcessorUsageWeight* = 1.

9. The method of claim 4, wherein each power mode comprises operating parameters for functional units of the add-on component.

10. The method of claim 10, wherein one of the operating parameters comprises how often to scan for a wireless network connection.

11. A computer readable medium having stored thereon a sequence of instructions, which when executed by a processor, cause the processor to perform a method comprising:

determining a power mode with which to operate an add-on component within a processing system; and

operating the add-on component in the power mode.

12. The computer readable medium of claim 11, wherein the add-on component comprises a Network Interface Card.

13. The computer readable medium of claim 11, wherein determining the power mode comprises determining a processor usage for the processor; determining a battery level for a battery of the processing system; calculating a power mode value based on the processor usage and the battery level; and selecting the power mode based on the power mode value.

14. The computer readable medium of claim 13, wherein determining the processor usage comprises reading a value corresponding to the processor usage from a register of the processor.

15. The computer readable medium of claim 13, wherein determining the battery level comprises querying an operating system for the processing system to obtain the battery level.

16. The computer readable medium of claim 13, wherein calculating the power mode value is in accordance with the formula:

$$\text{PowerModeSetting} = \frac{\text{Battery Level} * \text{BatteryLevelWeight} + \text{Processor Usage} * \text{ProcessorUsageWeight}}{\text{BatteryLevelWeight} + \text{ProcessorUsageWeight}},$$

wherein the *BatteryLevelWeight* = 3, and the *ProcessorUsageWeight* = 1.

17. The computer readable medium of claim 13, wherein each power mode comprises operating parameters for functional units of the add-on component.

18. The computer readable medium of claim 17, wherein one of the operating parameters comprises how often to scan for a wireless network connection.

19. A system, comprising:

a processor;

a Network Interface Card (NIC) coupled to the processor; and

a memory coupled to the processor, the memory storing instructions which when executed by the processor, cause the processor to perform a method comprising:

dynamically determining a power mode with which to operate the NIC; and
operating the NIC in the power mode.

20. The processing system of claim 19, which is a mobile processing system.

21. The processing system of claim 20, wherein determining the power mode comprises determining a processor usage for the processor, determining a battery level for a battery of the processing system; calculating a power mode value based on the processor usage and the battery level; and selecting the power mode based on the power mode value.

22. The system of claim 21, wherein determining the processor usage comprises reading a value corresponding to the processor usage from a register of the processor.

23. The system of claim 21, wherein determining the battery level comprises querying an operating system for the processing system to obtain the battery level.

24. The system of claim 19, wherein the method is performed by a driver for the NIC.

25. The system of claim 21, wherein calculating the power mode is in accordance with the formula:

$$\text{PowerModeSetting} = \frac{\text{Battery Level} * \text{BatteryLevelWeight} + \text{Processor Usage} * \text{ProcessorUsageWeight}}{\text{BatteryLevelWeight} + \text{ProcessorUsageWeight}},$$

wherein the *BatteryLevelWeight* = 3, and the *ProcessorUsageWeight* = 1.

26. The system of claim 21, wherein each power mode comprises operating parameters for functional units of the NIC.

27. The system of claim 26, wherein one of the operating parameters comprises how often to scan for a wireless network connection.